

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
15 January 2004 (15.01.2004)

PCT

(10) International Publication Number
WO 2004/005756 A1

(51) International Patent Classification⁷: **F16H 3/70**

LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW.

(21) International Application Number:
PCT/IN2002/000143

(22) International Filing Date: 2 July 2002 (02.07.2002)

(25) Filing Language: English

(26) Publication Language: English

(71) Applicant and

(72) Inventor: **AMBARDEKAR, Vishvas** [IN/IN]; C/O, Mr. V. S. Ambardekar, Plot N° B-82, Flat N° 1, Tulshibagwale Colony, Sahakar Nagar N° 2, Pune 411 009 (IN).

(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

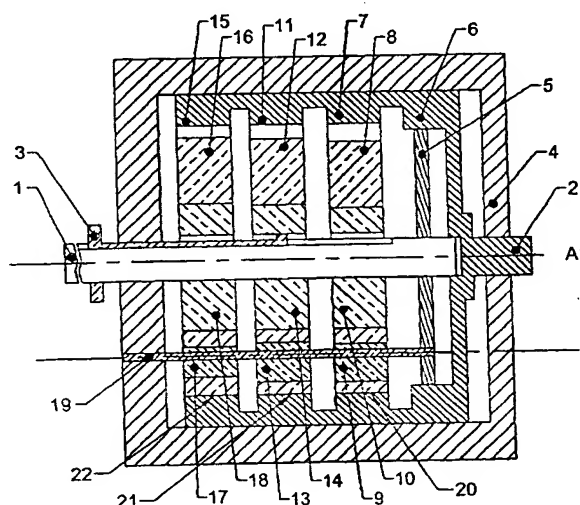
Published:

- with international search report
- with amended claims and statement

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: ECCENTRIC GEARBOX



(57) **Abstract:** An eccentric gearbox with selectable large speed ratio, in this gearbox many eccentric gear (8, 12, 16) pairs are assembled in parallel, and are connected to a common input shaft (1) and a common output shaft (2). In every gear pair (8, 12, 16), one gear keeps its orientation fixed with respect to a fixed part called as fixed gear (8, 12, 16) and another gear that rotates about its own axis is called as moving gear (7, 11, 15). Difference in number of teeth on the two gears of a gear pair is kept to one tooth or more. Through proper selection of a particular gear pair any speed ratio can be selected. In this way, it is possible to make a compact gearbox, with multiple large speed ratios. Such a gear box can be used in automobiles, robot manipulators, earth moving equipments, space applications, toys, hand held tools and many other applications.